of present claim 5 is the closest embodiment of Applicants' invention to Ahlheim et al. In the compound of claim 5, R_1 and R_2 each represents a hydroxyl group, and R_3 represents a hydrogen atom. Thus, there are two differences between the compound of claim 5 and the compound of Ahlheim et al. (see compound no. 2 at page 781 of Ahlheim et al.) First, R_3 is hydrogen instead of a methyl group, as noted by the Examiner. Second, the compounds are stereoisomers of each other.

The Examiner's position is that the present invention, including the subject matter of claim 5, is *prima facie* obvious in view of Ahlheim et al. Applicants respectfully disagree. The Examiner asserts that the substitution of methyl for hydrogen is not a patentable modification absent unexpected or unobvious results. Here, however, the substitution is hydrogen for methyl. The Examiner has not cited any evidence showing that it would have been obvious to substitute a hydrogen atom for a methyl group in the present context. The prior art must disclose, teach or suggest the desirability of a proposed modification. Here, there is no teaching or suggestion in Ahlheim et al. to change R_3 from a methyl group to hydrogen to increase the lipophilicity of Ahlheim et al.'s compound as asserted by the Examiner. Furthermore, there is no teaching or suggestion in Ahlheim et al. to modify the stereoisomer of Ahlheim et al. to the stereoisomer of present claim 5.

Even if a prima facie case of obviousness of the compounds of present invention could be established based on Ahlheim et al., which it cannot, the compounds of the present invention provide unexpectedly superior results in comparison to Ahlheim et al. that establish the patentability of the present invention over Ahlheim et al.

In this regard, Applicants submit herewith an executed Declaration Under 37 C.F.R. § 1.132 of co-inventor Kenichiro Sato[1]. As explained in his Declaration, Mr. Sato conducted an experiment to demonstrate the unexpected superiority of the present invention with respect to Ahlheim et al. As explained at page 2 of the Declaration, Mr. Sato first synthesized a resin using as the monomer, the compound of claim 5 of the present application. In this experiment, 8.9 g of the target resin was recovered in a white color powder form. The resin had a weight-average molecular weight of 16,000 in terms of polystyrene conversion.

A second synthesis experiment was conducted using as the monomer, compound 2 described at the top of page 781 of Ahlheim et al. Polymerization was attempted using the same conditions as were used to polymerize the monomer compound of claim 5 of the present application. However, as explained in Mr. Sato's Declaration, the monomer compound was unchanged (i.e., it did not polymerize) and it was recovered unreacted.

Thus, as appears from these results, the monomer compound of the present invention can be polymerized to obtain a resin and allows control of the molecular weight of the resin. In contrast, the compound of Ahlheim et al., which has a different structure from the compound of the present invention, cannot be polymerized and a resin cannot be obtained from Ahlheim et al.'s compound. There is nothing in Ahlheim et al. which would cause one of ordinary skill in the art to expect the superior results obtained with the compounds of the present invention.

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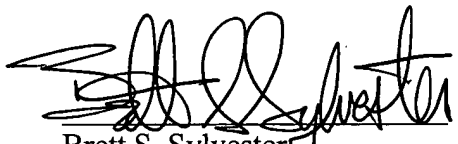
[1] For the Examiner's convenience, an unexecuted "clean copy" of the Declaration which may be easier to read is also being submitted herewith.

Thus, Applicants have compared the closest embodiment of their invention (that is, the compound of present claim 5) to the closest prior art (that is, compound 2 at page 781 of Ahlheim et al.), and showed that the present invention provides unexpectedly superior results in comparison to the prior art.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the § 103 rejection over Ahlheim et al.

Allowance is respectfully requested.

Respectfully submitted,



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Date: April 18, 2002

#18

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: :

Kenichiro Sato et al. : Group Art Unit: 1623

Appln. No.: 09/275,941 : Examiner: OH, TAYLOR V

Filed: March 25, 1999 :

For: NOVEL (METH)ACRYLIC ACID ESTER COMPOUND

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Kenichiro Sato, do declare and state as follows:

I am a citizen of Japan.

I graduated from Osaka University, Faculty of Engineering, Course of Applied Fine Chemistry in March 1992.

Since April 1992 I have been employed by Fuji Photo Film Co., Ltd. and have been engaged in research and development of photoresist photosensitive materials for semiconductors at the Yoshida-Minami Factory Research Division of the company.

I am a co-inventor of the invention described and claimed in the above-named application, and I am familiar with the subject matter disclosed by the application as well as the Office Action dated November 23, 2001 concerning the application.

In order to demonstrate the unexpected superiority of the present invention, the following experimentation was conducted by me or under my supervision.

EXPERIMENTATION

Synthesis of the resin using the monomer compound of the present invention (the monomer compound of claim 5)

9.2 of the monomer compound of claim 5 of the present invention, 250 mg of a radical polymerization initiator V-65 (manufactured by Wako Pure Chemical Industries, Ltd.) and 30 mg of mercaptoacetic acid were dissolved in a mixture of 29 g of N,N-dimethylacetoamide and 4 g of tetrahydrofuran. The mixture was then added dropwise with a drop time of 4 hours to 4 g of N,N-dimethylacetoamide heated to 60 °C, under a nitrogen atomosphere. The solution was heated and stirred over 4 hours and after the solution was cooled to a room temperature, the solution was charged into 1 liter of distilled water, and thus 8.9 g of the target resin was recovered in a white color powder form. The resin had a weight-average molecular weight of 16,000 in polystyrene coversion.

Synthesis of the resin using the monomer compound 2 of Makromol. Chem. 193(3), pp. 779 to 787 (Ahlheim et al)

The monomer compound 2 described at the top of page 781 of Makromol. Chem. 193(3) was prepared and then polymerization was attempt in the same conditions as the above. The monomer compound was unchanged as it was and recovered.

As is apparent from the results above, the monomer compound of the present invention can be polymerized to obtain a resin and enables to control a

molecular weight of a resin. The monomer compound of Ahlheim et al that has a different structure from the monomer compound of the present invention cannot be polymerized and the resin cannot be obtained from the monomer. As is apparent from the above, the monomer compound of the present invention has a specified effect.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectively submitted,

Date: Apr. 16, 2002

Kenichiro Sato

Kenichiro Sato

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	:	
Kenichiro Sato et al.	:	Group Art Unit: 1623
Appln. No.: 09/275,941	:	Examiner: OH, TAYLOR V
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The monomer compound 2 described at the top of page 781 of Makromol. Chem. 193(3) was prepared and then polymerization was attempt in the same conditions as the above. The monomer compound was unchanged as it was and recovered.

As is apparent from the results above, the monomer compound of the present invention can be polymerized to obtain a resin and enables to control a

molecular weight of a resin. The monomer compound of Ahlheim et al that has a different structure from the monomer compound of the present invention cannot be polymerized and the resin cannot be obtained from the monomer. As is apparent from the above, the monomer compound of the present invention has a specified effect.

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Respectively submitted,

Date: _____

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Kenichiro Sato